



### ADVISOR HANDBOOK

2016-2017

#### Welcome to the

## Mississippi Envirothon

- Aquatic Ecology
- Forestry
- Soils/Land Use
- Wildlife
- Current Issue: Agricultural Soil & Water Conservation Stewardship

#### Sponsored by:

Mississippi Association of Conservation Districts, Inc.
Mississippi Soil & Water Conservation Commission
Mississippi Department of Environmental Quality
Mississippi Department of Wildlife, Fisheries and Parks
Chevron Pascagoula Refinery

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### 1. ABOUT THE COMPETITION

#### Introduction & History

#### Introduction

Welcome to the Mississippi Envirothon. You are now part of the environmental education history of this state by participating in the annual Mississippi Envirothon. This handbook contains information you will need to participate in this event.

The Envirothon is the ultimate environmental education experience. Participants must, over the course of several months of study, prepare themselves for testing in these **five** areas:

soils/land use • aquatic ecology • wildlife • forestry
 this year's current environmental issue,
 which changes annually

Designed to foster cooperation and teamwork, **5-member teams** are tested not only on their knowledge in the topic areas, but also on their ability to apply that knowledge to solve real-life problems. Problem solving and teamwork are skills that will enhance the participants' ability to take leadership roles after high school or college, no matter what their chosen field or career.

#### History

The Envirothon began in Pennsylvania in 1979 in a single county. The program had such appeal that by 1988 it had expanded into three states and had taken on a national scope. Now, 29 years and one million students later, the program has grown to include more than 57 states, Canadian provinces and territories and is North America's largest high school environmental competition. Mississippi joined the Envirothon "family" in 1998 with the first state competition.

The overall goal of Envirothon is to promote natural resource education in a manner that succeeding generations will be more environmentally literate, with the skills and knowledge to make informed decisions regarding the environment and our natural resources.

# Overview of the Mississippi Envirothon Program

Identify an advisor who is interested in starting an Envirothon Program.

#### Form a Mississippi Envirothon Team (five students and one alternate).

(Can have maximum of two teams representing a School/Organization.)

#### **Have Team/Teams train in the five areas:**

(Learning Objectives for each area are provided in this handbook)

- 1. Forestry
- 2. Wildlife
- 3. Aquatic Ecology
- 4. Soils/Land Use
- 5. Current Issue (changes from year to year)

#### Register for the Mississippi Envirothon Area Competition.

Five top teams at the Area Competition – plus the top FFA team – will proceed to the Mississippi Envirothon State Competition.

#### Register for the Mississippi Envirothon State Competition.

The top teams at the Mississippi Envirothon State Competition will receive scholarships. Their advisor will receive a cash award.

The Mississippi Envirothon State Winner will receive assistance toward a trip to the National Conservation Foundation (NCF) Envirothon Competition to be held at Mount St. Mary's University, Emmitsburg, Maryland, July 23-July 29, 2017.

### 2. Mississippi Envirothon

#### Goals & Objectives

#### Goal 1

To promote a desire to learn more about the natural environment and equip students with the knowledge and skills needed to apply the basic principles and practices of resource management and ecology to complex environmental issues.

#### **Objectives:**

- a. Students should be able to demonstrate a basic knowledge of concepts in natural resource management and ecology, especially in the areas of soil/land use, aquatic ecology, forestry, wildlife, and current environmental issues.
- b. Students should be able to analyze soil, aquatic, forestry, wildlife, and current environmental issues in problem-solving activities involving natural resource issues.

#### Goal 2

To promote stewardship of natural resources and to encourage the development of the critical thinking, cooperative problem-solving and decision-making skills required to achieve and maintain a natural balance between the quality of life and the quality of the environment.

#### **Objectives:**

- a. Students should be able to identify environmental issues in a given situation and the various interests involved, while taking into consideration ecological, social, and economic factors.
- b. Students should be able to investigate issues using both primary and secondary sources of information and synthesize the data gathered. Additionally, students should demonstrate the ability to:
  - Listen with comprehension.
  - Collect, organize, and analyze information.
  - Frame appropriate questions to guide their investigation.
  - Use a range of resources and technologies.
  - Critically examine information.

#### (Goal 2 Objectives continued)

- c. Students should be able to assess the nature of information and materials.
- d. Students should be able to identify alternative solutions for various issues. They should be able to evaluate alternative solutions with respect to their ecological and cultural implications.
- e. Students should be able to identify and evaluate their own position on environmental issues and their associated solution.
- f. Students should be able to evaluate the interaction of the proposed solution with other factors and have the ability to plan ahead when evaluating long and short-term solutions for environmental problems.

#### Goal 3

To provide students with experience in environmentally-oriented activities, enabling them to become environmentally aware, action-oriented citizens.

#### **Objectives:**

- a. Students should have knowledge of a wide range of action strategies involved in seeking solutions to environmental problems.
- b. Students should have a knowledge of agencies and organizations that can be used as resources to seek solutions to environmental and natural resource problems.
- c. Students should be able to evaluate the impact of their own actions affecting a particular environmental problem and devise alternative actions to work towards improving the environmental condition.
- d. Students should be able to work independently and/or collaboratively to solve environmental problems.

### 3. Advisor Responsibilities

The Advisor or Coach is the backbone of the Envirothon team. This person organizes the team, motivates the team members, and helps the Envirothon team study and train in the five areas (forestry, wildlife, aquatic ecology, soil/land use, and current issue) for the Area Envirothon Competition.

Throughout the year, the advisor/coach guides the team's preparation for the competition. It is very important that advisors teach team skills and transferring a strong environmental ethic to the team members. An advisor has an important part in the team's success and is to be congratulated for making such an important investment in the growth of the team by knowledge and hands on experiences.

Advisors are welcome to contact Mississippi Envirothon Coordinator Clay Burns at cburns@mswcc.ms.gov or 601-354-7645. He will be glad to answer questions or help in any way possible.

#### **Training Your Envirothon Team**

Distance Learning Training in each topic area is offered for teams in all four state areas.

Learning Bins can be checked out for a week at-a -time from the Mississippi Envirothon Coordinator.

Training CDs and power points are available from the Mississippi Envirothon Coordinator at 601-354-7645.

Local Soil and Water Conservation Districts (SWCD) can help set up local training.

Use the five area (forestry, wildlife, aquatic ecology, soil/land use, and current issue) Learning Objectives to help you train your team.

Review the sample tests in this handbook.

### 4. Competition Rules

- 1. Only students enrolled in grades 9-12 during the current competition school year are eligible to participate and compete in the Mississippi Envirothon Competition. Each team is allowed one alternate.
- 2. Each team will consist of five members from the same school/organization. Students from the same school district's junior high may be included if eligible by grade.
- 3. Each school/organization may send a maximum of two teams to the area competition. Each team must consist of members from the same school, organization, or association. There may only be one FFA Envirothon team per a school unless there is no academic team, in which case there may be two FFA teams or two academic teams.
- 4. Once the competition has begun advisors, sponsors, teachers, alternates, or parents must stay in the designated area. No communication is allowed between team members and advisors, sponsors, teachers, alternates, or parents. Violation of this rule will cause disqualification of the team.
- 5. At the registration table at the Area Competition you will be asked to finalize your team/teams list of members' names and alternate's name. Changes to your team can be made up to this point.
- 6. All teams proceeding to the state competition will be required to use the same team members and alternate member that competed in the Area Competition.
- 7. Substitution of an alternate for the state competition must be approved by the Mississippi Envirothon Steering Committee. A written request must be received at least seven days prior to the state competition. Mississippi Envirothon Steering Committee will be contacted to approve the alternate substitution.
- 8. The Mississippi Envirothon State winning team will attend flexible training opportunities provided by the State Coordinator for the National Conservation Foundation (NCF) Envirothon. The Mississippi Envirothon Coordinator will work with the team's schedule.

### 5. Before the Competition

Maintain close contact with the local Soil & Water Conservation District Office. A directory of SWCD offices is on page 32.

#### Be sure the following checklist is completed:

- A Registration Form has been faxed or mailed to the MSWCC Office by the due date (DATE PENDING). The Registration Form is on page 26.
- Registration Fees (if any) have been paid.
- Transportation has been arranged to the competition location.
- Team members are familiar with rules of the competition.

### 6. How the Mississippi Envirothon Competition Works

An Envirothon team consisting of five members will rotate through a series of five stations: Soils/Land Use, Aquatic Ecology, Wildlife, Forestry, and Current Issue.

A natural resource specialist will manage each station. For example, a forester may conduct the Forestry Station and a soil scientist can be expected to coordinate the activities at the Soils Station.

At each of the five stations, the Envirothon team will be given a written test to complete. The test will consist of 50 percent written questions and 50 percent hands-on questions. Each test is to be taken as a team with each member participating hands-on. Test questions may be asked in a variety of ways: multiple choice, true/false, essay, or fill in the blank. (See sample test questions.)

At the conclusion of the Envirothon competition the scores will be tabulated and the top five teams from each area

competition will move on to the state competition.

At the State competition teams will take a written and hands-on test, and will be expected to give an oral presentation based on the topic provided to them prior to the state event. The presentation topics will be based on a hypothetical current environmental problem or issue.

Teams should use visual aids during the oral presentation to show how they recognized and solved the environmental problem. (See rules and sample score sheet.)

After combining scores from the written tests and the oral presentation, the top five teams will be recognized and receive awards.

The top scoring team at the state competition will represent Mississippi at the National Conservation Foundation (NCF) Envirothon Competition.

### 7. Aquatic Ecology

#### **Learning Objectives**

- A. Identify the processes and phases for each part of the water cycle.
- B. Describe the chemical and physical properties of water and explain their importance for freshwater and saltwater ecosystems.
- C. Discuss methods of conserving water and reducing point and non-point source pollution.
- D. Analyze the interaction of competing uses of water supply, hydropower, navigation, wildlife, recreation, waste assimilation, industry, and others.
- E. Identify common aquatic organisms through the use of a key.
- F. Delineate the watershed boundary for a small water body.
- G. Explain the different types of aquifers and how each type relates to water quality and quantity.
- H. Briefly describe the benefits of wetlands, both function and value.
- I. Describe the changes to the aquatic ecosystem based on alteration to the aquatic habitat.
- J. Know methods used to assess and manage aquatic environments and utilize water quality information to assess general water quality of a given body of water (includes sampling techniques and water quality parameters used to monitor point and non-point source pollution).
- K. Be familiar with major methods and laws used to protect water in a given situation.

#### Aquatic Ecology Sample Test Questions

1.	Sewage treatment plants are designed to remove materials that damage water
	quality and threaten public health. Most facilities employ a combination of what
	to remove harmful substances? (two points each)

A			
 В.			

- 2. What is the most prevalent source of agricultural water pollution?
  - A. Sedimentation
  - B. Nutrients
  - C. Animal feeding operations
  - D. Livestock grazing
  - E. Irrigation
- 3. Forested wetlands functions and values include:
  - A. Water purification
  - B. Storm water retention
  - C. Reduction in downstream sedimentation
  - D. All of the above
  - E. A and B only
- 4. Diurnal fluctuations in dissolved oxygen are primarily due to:
  - A. Reduced photosynthesis at night in comparison to daylight conditions
  - B. Higher abundances of aquatic insects at night
  - C. Increased input of clay particles at night
  - D. Increased respiration of aquatic organisms during the day
  - E. Decomposition due to the death of aquatic organisms
- 5. Gulf Coast waters often experience a "dead zone" characterized by massive phytoplankton blooms which have died and depleted dissolved oxygen. Which is an example of an agricultural activity in the Midwest that would likely result in a heavy phytoplankton blooms in the Gulf of Mexico?
  - A. Excessive use of pesticides
  - B. Nutrient runoff from excess fertilizer
  - C. Oil spills from farming equipment
  - D. All of the above

#### Aquatic Ecology Sample Test Questions (continued)

- 6. The Asian carp, an invasive species which was stocked in Mississippi to control algae in catfish ponds. It has escaped to the Mississippi River and is now threatening our rivers and streams. How does this fish cause adverse effects to native species?
  - A. Out competes native species
  - B. Displacement of native species
  - C. Shifts population dynamics of fisheries
  - D. None of the above
  - E. All of the above
- 7. A pH between \_\_\_\_\_ is favorable for supporting life in natural waters.
  - A. 4.5 7.0
  - B. 8.0 10.0
  - C. 6.5 8.2
  - D. 5.0 9.5
  - E. 4.5 10.0
- 8. Which of the following types of wastewater is considered gray water?
  - A. Washing machines, dish water, showers, baths, and sinks
  - B. Potable water
  - C. Effluent
  - D. Thermally polluted water
  - E. All of the above

#### Sample Questions Key

- 1. A. Mechanical Removal
- 2. A Mechanical Kemova
- 3. D
- 4. A
- 5. B
- 6. B
- 7. C
- 8. A

B. Bacterial Decomposition

### 8. Forestry

#### **Learning Objectives**

- L. Identify common trees without a key and identify specific or unusual species of trees or shrubs through the use of a key.
- M. Understand forest ecology concepts and factors affecting them, including the relationship between soil and forest types, tree communities, regeneration, competition, and succession.
- N. Understand the cause/effect relationship of factors affecting tree growth and forest development (climate, insects, microorganisms, etc.).
- O. Understand how wildlife habitat relates to forest communities, forest species, forest age structure, snags, and den trees, availability of food, and riparian zones.
- P. Understand the value of trees in urban and suburban settings and factors affecting their health and survival.
- Q. Understand how the following issues are affected by forest health and management: biological diversity, forest fragmentation, air quality, fire, and recreation.
- R. Understand basic forest management concepts and tools such as how various silvicultural practices are utilized, the use of tree measuring devices, and best management practices.
- S. Identify complex factors which influence forest management decisions (economic, social, and ecological).
- T. Apply silviculture concepts and methods to develop general management recommendations for a particular situation and management goals.

#### Forestry Sample Test Questions

- 1. Which of the following requires extremely high temperatures, or fire, in order for the seeds to be released?
  - A. Walnut
  - B. Serotinous cone
  - C. Samara
  - D. Cypress cone
  - E. All of the above
- 2. Which cropland conservation practice involves the re-establishment of streamside forests by including trees, shrubs, and grass plantings to slowdown non-point water pollution?
  - A. Perennial Stream Cover
  - B. Contour Buffers
  - C. Riparian Forest Buffers
  - D. Rip-Rap Structure Enhancement
- 3. What are the three stages of forest succession?
  - A. Herbaceous vegetation, Shrubs, and Trees
  - B. Primary Succession, Secondary Succession, and Climax Forest
  - C. Pine plantation, Pulpwood stand, and Old growth forest
  - D. Pioneer, Flora, and Fauna
  - E. Pine, Oak, Hickory
- 4. During a harvesting operation, logging roads should be maintained to prevent soil erosion from reaching the stream. This can be accomplished by installing "water bars and water turnouts." At what spacing should the water bars be installed?
  - A. Every 100 feet
  - B. Every 250 feet
  - C. Water bars are installed based on the "grade of road" (percent of slope)
  - D. Water bars are installed based on the width of the logging road
- 5. Tree growth and accumulated biomass are greatest and energy flow is lowest during which stage of natural succession?
  - A. Pioneer
  - **B.** Primary
  - C. Secondary
  - D. Sub-Climax
  - E. Climax

#### Forestry Sample Test Questions (continued)

6. What are natural resources that cannot be replaced?

A. Renewable

C. LimitingD. Fossil FuelsE. Bio Fuels

B. Non-renewable

	prescribed fire?		
	<ul><li>A. Smoke</li><li>B. Escaped fire (outside of fire</li><li>C. Heat</li><li>D. Ash</li><li>E. Detrimental to wildlife</li></ul>	lines)	
8.	tallied using a 10 factor prism v	was: N EXA	the stand basal area: The number of trees Plot 1 = 10; Plot 2 = 12; Plot 3 = 15; Plot 4 = AMPLE OF AN ON-SITE QUESTION WHERE ONE ON.
	A. 65 B. 1300 C. 650 D. 130 E. 13		
5	ample Questions Key		
1. 2. 3. 4. 5.	C B	6. 7. 8.	B A EXAMPLE of On-Site Question

7. What has the greatest potential negative effect associated with the use of

### 9. Soils/Land Use

#### **Learning Objectives**

- U. Recognize soil as an important resource.
- V. Describe basic soil properties and formation factors.
- W. Understand soil drainage classes and know how wetlands are defined.
- X. Determine basic soil properties and limitations, such as mottling and permeability, by observing a soil pit or soil profile.
- Y. Identify types of soil erosion and discuss methods for reducing erosion.
- Z. Utilize soil information, including soil surveys, in land use planning.
- AA. Discuss how soil is a factor in, or impacted by, non-point source pollution.

#### Soils/Land Use Sample Test Questions

- 1. Alfalfa and some clovers prefer neutral pH soils. Would a soil at pH 7.2 require an application of lime in order make it suitable for alfalfa production? **YES** or **NO** (Circle your answer).
- 2. Which of the following is a true statement about conventional till farming?
  - A. Increases soil organic matter
  - B. Decreases sedimentation
  - C. Increases sedimentation
  - D. Good for soil structure
- 3. Which of the following is not considered a soil forming factor?
  - A. Time
  - B. Chemistry
  - C. Parent Material
  - D. Relief
  - E. Plant and Animal Life
- 4. Name two state or federal agencies within Mississippi that provide free on-site technical assistance with natural resource management for private landowners?

A	(2 points)
В.	(2 points)

- 5. A sandy texture indicates a soil with a high percentage of sand, and a clayey soil indicates high clay content. A soil with a loamy texture is indicative of what?
  - A. A soil with approximately equal amounts of sand, silt and clay
  - B. A soil with high silt content.
  - C. A soil that cracks when it is dry
  - D. A soil that frequently floods
  - E. A soil with greater than 45% clay

#### Soils/Land Use Sample Test Questions (continued)

6. Match the appropriate answer from the ri hand column (one point each):	ght-hand column with the items in the left
Color of the surface soil Reddish and brownish subsoil Gray subsoil Mottled subsoil; splotchy pattern of brownish and grayish colors	<ul><li>A. Good aeration, little water logging</li><li>B. Long periods of severe O2 depletion</li><li>C. Organic matter content</li><li>D. Fluctuating water table</li></ul>

- 7. Which of the following would have the most erosion due to surface water runoff?
  - A. Overgrazed pasture
  - B. Cutover forestland
  - C. No-till cropland
  - D. Conventional tilled cropland
  - E. Forested hillside with an 18 percent slope
- 8. Which of the following is NOT true about earthworms in relation to soils?
  - A. They increase soil productivity
  - B. They increase soil bulk density
  - C. They increase soil permeability
  - D. They increase soil aeration
  - E. Their casts increase OM, nitrogen, and cation exchange capacity of soils

#### Sample Questions Key

1. NO	C
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- 2. C
- 3. B
- 4. A. Mississippi Cooperative Extension Service; Mississippi Department of Wildlife, Fisheries and Parks
  - B. Mississippi Forestry Commission; Natural Resource Conservation Service; U.S. Fish and Wildlife Service
- 5. A
- 6. C...A...B...D
- 7. D
- 8. B

### **10. Wildlife**

#### **Learning Objectives**

- BB. Identify common wildlife species and wildlife signs (keys will be used for more extensive identification).
- CC. Identify basic wildlife survival needs.
- DD. Describe specific adaptations of wildlife to their environment and their role in the ecosystem.
- EE. Describe predator/prey relationships and examples.
- FF. Describe the potential impact of the introduction of non-native species.
- GG. Describe the major factors affecting threatened and endangered species and methods used to improve the populations of these species.
- HH. Describe ways habitat can be improved for specific species by knowing their requirements.
- II. Discuss the concepts of carrying capacity and limiting factors.
- JJ. Discuss various ways the public and wildlife managers can help in the protection, conservation, management, and enhancement of wildlife populations.
- KK. Describe food chains/webs and cite examples.
- LL. Describe factors that limit or enhance population growth.
- MM. Evaluate a given habitat for its suitability for designed species, giving a description of their habitat needs.

#### Wildlife Sample Test Questions

1.	ood webs help illustrate the complex ways that and are transferred among living organisms and their environment	s.
	and	
2.	hich of the following would be the best reason for a wildlife manager to maintable balance of red and white oak species in a stand?	ain
	<ul> <li>To create species diversity</li> <li>To reduce the impact of disease</li> <li>To provide hard mast (acorns) which will help game animals survive the winter</li> <li>To ensure that a there will not be a complete mast failure during a particular year</li> <li>Because red oaks drop acorns in early spring while white oak acorns drop in the</li> </ul>	
3.	fall  /hich of the following species is an example of an r-strategist which is typically nort-lived and has high reproductive rates?	
	. Black Bear . Gopher Tortoise . West Indian Manatee . Northern Bobwhite Quail . Bald Eagle	
4.	unding for both game and nongame wildlife conservation in Mississippi has comrimarily from:	ıe
	<ul> <li>Environmental organizations such as Ducks Unlimited, National Turkey ederation, etc.</li> <li>Private contributions from individuals</li> <li>Sale of specialty wildlife license plates</li> <li>Sale of hunting licenses and taxes placed on hunting-related sporting goods</li> <li>State taxes</li> </ul>	
5.	Name one wild animal that would make an acceptable household pet.	
	Answer:	

#### Wildlife Sample Test Questions (continued)

- 6. Which of the following species is slowly increasing from near extinction in the state?
  - A. Florida Panther
  - B. Red Wolf
  - C. Ivory-billed Woodpecker
  - D. American Burying Beetle
  - E. Black Bear
- 7. Prescribed burning is one of the most cost effective practices for improving wildlife habitat in pine stands because:
  - A. Burning sets back the successional stage of an area, controls woody vegetation, and increases herbaceous plant diversity
  - B. Burning is easy and safe to perform
  - C. Tree species will usually grow larger after a burn
  - D. Burning heats the soil making it more productive
  - E. All of the above
- 8. When stocking a farm pond, the ratio of bream to bass should be 10:1. Which of the following is the correct stocking rate for Mississippi farm ponds?
  - A. 350 bream and 75 bass per acre
  - B. 500 bream and 50 bass per acre
  - C. 1000 bream and 100 bass per acre
  - D. 2000 bream and 200 bass per acre
  - E. All of the above would be acceptable stocking rates

#### Sample Questions Key

- 1. Energy and Nutrients
- 2. D
- 3. D
- 4. D
- 5. None! Wild Animals do not make good pets.
- 6. E
- 7. A
- 8. B

### **11. Current Issue 2016-2017**

#### **Agricultural Soil & Water Conservation Stewardship**

#### More information released in late September

#### **Key Topics**

- 1. Soil and Water Conservation best management practices; their purpose and implementation.
- 2. How are soil and water conservation best management practices interrelated to the management of wildlife, forestry and aquatic systems?
- 3. How do agriculturists maintain a balance between their quality of life versus the quality of the environment?

#### **Learning Objectives**

Upon completion of the training, the student will be able to:

- 1. Identify and recommend soil and water conservation best management practices in agriculture.
- 2. Describe the role of the federal government in conservation programs that benefit both agricultural producers and the environment.
- 3. Identify the concept of soil quality/health to provide the needed functions for the conservation planning process.
- 4. Identify various types of soil erosion and utilize different methods to estimate and predict soil erosion to assess land-use impacts.
  - a. RUSLE equation
  - b. Aerial Photographs
  - c. Topographic Maps
  - d. Soil Maps
  - e. USDA Classification System
  - f. Soil Surveys
- 5. Explain why land-use planning is important to our ecosystems and to our economy to achieve sustainable agriculture.

#### 2017 Current Issue Agricultural Soil and Water Conservation Stewardship

#### **Resources**

#### **Online Resources**:

The Farm Bill 2014 Programs-

Fact sheet describing the conservation programs

http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/farmbill/

#### RCPP Projects by State-Link to Maryland projects (pdf)

www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/csp

#### **Farmers Guide to Conservation Stewardship Programs**

http://sustainableagriculture.net/wp-content/uploads/2015/02/CSP-Farmers-Guide-2015-final.pdf

#### **Conservation Choices for Maryland Farmers**

http://mda.maryland.gov/resource\_conservation/counties/ConservationChoice s\_2012\_FINAL%20(1).pdf

#### Guidelines for Soil Quality Assessment in Conservation Planning

http://www.nrcs.usda.gov/Internet/FSE DOCUMENTS/nrcs142p2 051259.pdf

#### **USDA Guidelines for Soil Health Assessment**

http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/assessment/

#### Soil Quality Indicator Facts Sheets

http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/health/assessment/?ci d=stelprdb1237387

#### **USDA** official site for RUSLE

http://www.ars.usda.gov/Research/docs.htm?docid=18095

#### Understanding Erosion with the Revised Universal Soil Loss Equation

http://www.5counties.org/docs/roadedu/2012 5c roads/rusle.pdf

#### **Expanded Resources Textbook:**

Soil Science Management 6th Edition, Edward J. Plaster (Contact: Delmar Cengage Learning)

# 12. Mississippi Envirothon Area Competitions

Area competitions: Date currently pending and is subject to change.

North Area - University of Mississippi Field Station, Oxford Central Area - Chautauqua Park, Crystal Springs South Area — Vancleave City Park, Vancleave Delta Area — Delta Conservation Demonstration Center, Metcalfe

This page will be updated on the MACD website when information becomes available:

www.macdweb.org



#### **2017 Mississippi Envirothon**

### Registration Form Area Competition Must have registration form in office by DATE PENDING

CNECK One:   Scholastic Team			
☐ FFA Team High School or Organization:			
Address:			
City:	State:		Zip:
Email:			
Phone: ( ) Fax			
Advisors: (1)	T-	Shirt Size	
(2)	T-9	Shirt Size	
Team:			
Print Names Legibly	M/F	Grade	T-Shirt Size
1.			
2.			
3.			
4.			
5.			
Alternate: (Optional)			

PLEASE MAIL OR FAX TO: MS ENVIROTHON, 680 Monroe Street, Suite B, Jackson, MS 39202 FAX: (601) 354-6628



**DUE: DATE PENDING** 

# 13. Mississippi Envirothon State Competition

**State Competition: DATE PENDING** 

This page will be updated on the website when information becomes available.

#### State competition awards and recognition

The Mississippi Envirothon Program is currently reviewing scholarship amounts and securing funds for 2016-2017 scholarships. This information will be made available at a later date.

### Mississippi Envirothon State Competition Oral Presentation Rules

- 1. Three to five minutes.
- 2. Each team member must have an equal part in the presentation.
- 3. Team may use a maximum of two visual aids. (Example: poster)
- 4. No electronic media of any kind.
- 5. Be prepared for a question and answer period by the judges.
- 6. Only 3" x 5" note cards may be used during the presentation.
- 7. All presentation materials will be collected at registration and taken to the Oral Presentation Station by a contest official.

# 14. National Conservation Foundation (NCF) Envirothon Competition

Mount St. Mary's University Emmitsburg, Maryland July 23-July 29, 2017

# 15. Soil & Water Conservation District Offices

<u>District</u>	<u>LOCATION</u>	PHONE #
Adams -	Natchez	(601) 442-1790
Alcorn -	Corinth	(662) 287-7223
Amite -	Liberty	(601) 657-8088
Attala -	Kosciusko	(662) 290-0702
Benton -	Ashland	(662) 224-3379
Bolivar -	Cleveland	(662) 846-1448
Calhoun -	Calhoun City	(662) 628-8732
Carroll -	Carrollton	(662) 237-0198
Chickasaw -	Houston	(662) 456-1499
Choctaw -	Ackerman	(662) 285-6398
Claiborne -	Port Gibson	(601) 437-8121
Clarke -	Quitman	(601) 776-9009
Clay -	West Point	(662) 494-6344
Coahoma -	Clarksdale	(662) 624-8727
Copiah -	Hazlehurst	(601) 894-1118
Covington -	Collins	(601) 765-6315
DeSoto -	Hernando	(662) 429-8687
Forrest -	Hattiesburg	(601)583-1184
Franklin -	Meadville	(601) 384-2310
George -	Lucedale	(601) 766-3962
Greene -	Leakesville	(601) 735-6652
Grenada -	Grenada	(662) 226-4441
Hancock -	Kiln	(228) 255-3225
Harrison -	Gulfport	(228) 831-1647
Hinds -	Jackson	(601) 965-5682
Holmes -	Lexington	(662) 834-4688
Humphreys -	Belzoni	(662) 247-8732
Issaquena -	Rolling Fork	(662) 873-0004
<u>Itawamba -</u>	Fulton	(662) 862-9794
Jackson -	Vancleve	(228) 826-2482
Jasper -	Fayette	(601) 764-2025
Jeff Davis -	Prentiss	(601) 792-8601
Jefferson-	Fayette	(601) 786-3181
Jones -	Laurel	(601) 425-4622
Kemper -	DeKalb	(601) 743-9588
Lafayette -	Oxford	(662) 234-8701
Lamar -	Purvis	(601) 794-5600
Lauderdale -	Meridian	(601) 483-4100
Lawrence -	Monticello	(601) 587-0885
Leake -	Carthage	(601) 298-9101
Lee -	Tupelo	(662) 680-9991

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<u>Leflore</u> -	Greenwood	(662) 455-1199
Lincoln -	Brookhaven	(601) 833-9324
Lowndes -	Columbus	(662) 328-4142
Madison -	Canton	(601) 859-4272
Marion -	Columbia	(601) 731-5400
Marshall -	Holly Springs	(662) 252-1286
Monroe -	Aberdeen	(662) 369-0044
Montgomery -	Winona	(662) 283-2443
Neshoba -	<u>Philadelphia</u>	<u>(601) 656-8783</u>
Newton -	Decatur	(601) 635-2327
Noxubee -	Macon	(662) 726-4425
Oktibbeha -	Starkville	(662) 320-4009
Panola -	Batesville	(662) 578-8045
Pearl River -	Poplarville	(601) 795-4409
Perry -	New Augusta	(601) 964-3298
Pike -	McComb	(601) 684-2584
Pontotoc -	Pontotoc	(662) 489-3563
Prentiss -	Booneville	(662) 728-9003
Quitman -	Marks	(662) 326-6002
Rankin -	Brandon	(601) 824-4601
Scott -	Forest	(601) 469-3464
Sharkey -	Rolling Fork	(662) 873-0004
Simpson -	Mendenhall	(601) 847-0035
Smith -	Raleigh	(601) 782-4294
Stone -	Wiggins	(601) 928-4881
Sunflower -	Indianola	(662) 887-9799
Tallahatchie -	Charleston	(662) 647-8857
Tate -	Senatobia	(662) 560-9001
Tippah -	Ripley	(662) 837-4464
Tishomingo -	Iuka	(662) 423-6272
Tunica -	Tunica	(662) 357-0027
Union -	New Albany	(662) 538-0030
Walthall -	Tylertown	(601) 876-0962
Warren -	Vicksburg	(601) 636-7679
Washington -	Greenville	(662) 332-8616
Wayne -	Waynesboro	(601) 735-6652
Webster -	Eupora -	(662) 258-2357
Wilkinson -	Woodville	(601) 888-4243
Winston -	Louisville	(662) 773-2207
Yalobusha -	Coffeeville	(662) 675-8000
Yazoo -	Yazoo City -	(662) 746-8358
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# 16. Mississippi Envirothon Coordinator Contact Information

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FAX: (601) 354-6628

